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Discrimination and Health in Latinos: An analysis of studies on perceived racial/ethnic discrimination and health outcomes in Latino populations in the US.

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ABSTRACT

Previous studies of ethnic minorities in the US highlight the evidence linking discrimination and its effects on health in those populations. Recently, increasing attention has been focused on establishing how discriminatory experiences based on Latino race/ethnicity affect the physical and mental health of Latinos. In addition, research has started to focus on how discrimination affects the social determinants of health for Latinos as well. The current project reviews ten empirical articles examining discrimination in community based to regional studies highlighting the consequences of discrimination on cardiovascular health, breast cancer treatment, stress and depression, wage earnings and educational attainment. Gaps in the knowledge highlight the need to consider Latino-specific discrimination but commonly report a negative relationship between discrimination and health outcomes. The findings of this study highlight how discrimination should be considered as an additional stressor to acculturative stress that could be contributing to the squandering of the Latino paradox.

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Long standing lines of evidence have established the strong pressure that socioeconomic status (SES) exerts on the health of individuals. At every step of the SES hierarchy, disparities exist with lower SES status displaying a strong correlation to poor overall quality of health and shorter length of life. Researchers are beginning to recognize the substantial influence that race and ethnicity impart on SES revealing, in short, that the effects of the social determinants of health change along with ethnic variations (Zsembik and Fennell, 2004). As unfortunate as the reality may be, discriminatory experiences are inextricably linked to different racial and ethnic categories in the United States. An abundance of studies have focused on African Americans examining how racial/ethnic (r/e) discriminatory experiences in US society can affect health (Williams et al., 2003); however, there is lack of focus on research underscoring the affects that r/e discrimination may be having on the health of Latino populations. To have a more complete understanding of the effects of discrimination among Latinos and Hispanic populations, we reviewed current scientific studies linking discrimination to health outcomes in the fields of physical health, mental health and the social determinants of health.

Relevant Background

The Latino paradox must be considered when studying Latino populations because of their unexpected health outcomes—usually in domains of resilience in overall mortality, infant birth weight, and mental health—relative to their generally lower SES status. The aspect of discrimination and its potential to strengthen or deteriorate the Latino paradox is not currently very well studied for Latinos. However, the topic is important because Latinos in the US may

experience discrimination at rates which represent additional psychosocial stressors, in addition to low SES, immigration and acculturation-related stressors (Gallo et al, 2007). If discrimination is a pathway that could be affecting Latino health then it could potentially be squandering the protective benefits of Latino culture important in the Latino paradox. In addition, if we consider the most complete definition of health to be the overall soundness of physical, mental and social well-being then it is important to strive to completely elucidate the full effect that discrimination may be exerting on any of these aspects of health. This will help us to better understand perhaps any detrimental effects discrimination has on the Latino paradox.

Latinos may be the fastest growing ethnic population in the United States with 42 million Latinos and Hispanics in 2003, but they are still a marginalized community within a system determined by a dominant, majority racial group. Discrimination, therefore, embodies differential treatment based on group membership consisting of a denial of opportunities or negative behaviors resulting from prejudice (Araújo and Borrell, 2006). It is within this context that we must conceptualize another process that is relevant to the Latino paradox: the process of acculturation. Acculturation is a dynamic process that is rarely specified but commonly associated with more time in the US (Zsembik and Fennell, 2005). It is currently thought that as acculturation increases the protective benefits of an individual's habits instilled by ideals of their respective Latin culture of origin are selectively coerced and replaced with more US based customs. This is potentially leading to the loss of resilience domains of the Latino epidemiological paradox. However, it is commonly misinterpreted that the acculturation process is a linear replacement of Latino habits with US habits. More importantly, it is commonly overlooked that aspects of every day life experiences relevant to the acculturation processes tend to be events that are completely out of the control of the individual. Discriminatory experiences

are such type of events. Discriminatory experiences based solely on the experiences of Latinos and Hispanics are very unique and encompass not only acute events such as prejudice in employment or housing opportunities but also every day aggravations that are out of the control of individuals (Araújo and Borrell, 2006). These events include poor treatment at restaurants, getting hassled for poor English speaking abilities or the use of the Spanish language, or unwarranted questions about legal status. They also include poor treatment for having Latino phenotype, different skin color, or overall features of Latino appearance. Discrimination is a common experience that comes into the lives of people of minority groups in the US without warrant and is indefinitely intertwined in the acculturation process of Latinos to US culture. However, it is rarely acknowledged in current work.

Insufficient explanations have been given to account for the ethnic disparities to health in the United States when regarding discrimination. Genetic studies do not come close to explaining why with more time in US the same people, undoubtedly with the same genetic make-up, display changes in health outcomes. Genetic diversity is greatest within groups not between groups and race itself may perhaps just be a socially constructed term (Jackson, 1991). So we must find adequate explanations for the disparities in health today that instead reflect differences in the established social systems that contribute to poor outcomes for Latino communities. Genetic difference is not a sufficient explanation.

The purpose of this study is to evaluate and interpret current evidence that links discrimination experiences based on Latino race and ethnicity and review the proposed relationships to health outcomes. The potential avenues through which discrimination may affect Latino health are very numerous and are worthy of elaboration (Araújo and Borrell, 2006). Still in its stages of infancy, studies are reporting supporting evidence between discrimination

and health outcomes in the fields of physical health, mental health and social determinants that affect health among Latino populations. Evidence presented in this review will highlight ten community based to regional studies that, for the most part, support negative relationships between discrimination and health variables in Latinos. These studies will look at physical domains such as cardiovascular variables, breast cancer treatment and self-reported physical health differences in regards to discrimination. In addition, the studies reviewed examine the effects of discrimination on stress and depression pertaining to the topic of mental health. Finally, studies purport that discrimination affects the ability of individuals to maintain or advance SES (life chances), which in turn, affects health outcomes in established ways. Therefore, the effects of discrimination on education attainment and job wages for Latinos will be reviewed when considering discrimination and the social determinants of health. We maintain throughout this review that discrimination is an additional mechanism through which the protective aspects of the Latino culture are being eroded in the Latino paradox, in a way that is intertwined with the acculturation processes. Studies being viewed will report the widespread prevalence of perceived discrimination and the experience of discrimination will be linked to detrimental aspects of health.

Discrimination and Health Outcomes

The present review found four articles linking discrimination to several venues of physical health, four articles relating discrimination and increased stress or depression rates, and discrimination by skin color connected to difficulties in education attainment or lower wages.

Physical Health

All studies pertaining to physical health reported a unique damage to the physical health of the participants mediated by discriminatory experiences of an acute or chronic nature, with

two of the four studies concluding significant results in models controlling for other factors. For example, Salomon and Jagusztyn (2008) found a surprising result. While measuring prior exposure to discriminatory experiences, Latinos that attribute past unfair treatment to race had a higher resting systolic blood pressure (significant difference within ethnic group, $p< 0.05$) than those who did not attribute past unfair treatment to race. The finding was surprising in that the study aimed simply to measure two main cardiovascular variables, resting blood pressure (BP) and heart rate (HR), in an experimental set-up to examine cardiovascular response to a rude, ill-mannered research assistant. The study consisted of college students from a southern university and contained 72 undergraduates, 18 of which were Latino/a participants, without prior high BP or cardiovascular disease (CVD) diagnosis. Perceived ethnic discrimination was measured with two established scales to capture the attribution of unfair treatment in everyday life to race, ethnic, religion or physical individual characteristics. The study used a blood pressure monitor to measure systolic blood pressure (SBP) during an interaction with a trained assistant who induced an interpersonal stressor (i.e. acted rudely by tearing up a form the students completed and ignored the students during the experiment). The scientists used ANCOVAs and chi-square test to find significant differences between the resting SBP of Latino/a subjects that attributed ethnicity to past unfair treatment and those that did not. The scientist concluded, by showing that Latinos who attribute race to past unfair treatment have higher resting SBP, that discrimination may be a factor that contributes to CVD risk.

A study by Finch et al. (2009), using a sample of 3,012 foreign and U.S.-born Mexican-origin adults from Fresno, CA, found by measuring self-rating of overall physical health and self-reported chronic conditions that discrimination had significant links to poorer reported health. Self-reported health has been shown to be one of the most accurate predictors of

morbidity and mortality, as accurate as physician-rated measures and this study linked poor self-reported health to observed discrimination against the individual or an individual's friend in the community. This was one of the most complete studies measuring many other aspects contributing to global health including SES, national heritage, acculturation stress, and social support. Even when controlling for acculturative stress, the study concludes that poorer self-reported physical health is linked to discrimination and perhaps through a mental health aspect such as depression, this finding can be attributed to the detrimental effects that discrimination plays on physical health.

Using data from the SEER-Medicare file coupled to 1990 US census tract information, Hass et al. (2008) examined 47,866 women age 66-85 (with 1,704 Hispanics) to examine the effect that race/ethnicity and segregation have on the ability to attain adequate care for breast cancer. Using chi-square tests, the scientist compared characteristics of breast cancer of black and Hispanic women to characteristics of breast cancer in white women. The study reveals racial segregation is linked to disparities in breast cancer treatment including later diagnosis for breast cancer tumor and less likeliness to receive mastectomy or radiation treatment than Whites for Hispanics coming from census tracts with higher populations of Hispanics (OR,0.74; 95% CI, 0.61-0.89). The study found White-Hispanic disparities in models that controlled for only individual-level characteristics and were not significant in models controlling for all variables, but still maintains that women overall living in segregated areas receive less adequate breast cancer care.

Moreover, in the Albert et al. (2008) study using data from the Dallas Heart Study consisting of a multi-ethnic based probability sample of Dallas residents 30 to 65 years old, of which 191 were Hispanic with a mean age of 51.1 years, the scientist measured several risk

factors associated with CVD. This study was performed in an effort to examine the relationship between discrimination and the variables such as C-reactive protein concentration, pro-inflammatory cytokines, Ca2+ build-up for subclinical artherosclerosis, aortic plaque and aortic wall thickness. Participants were asked if they had ever been discriminated against because of their race. This study did not find a significant correlation between discrimination and the CVD-related risk variables that were measured. But the study did find that 22% of Hispanics reported r/e discrimination, and of those Hispanics that reported r/e discrimination, participants were more likely to be U.S.-born men, habitually smoke, and also have a higher propensity for hypertension (OR = 2.4, 95% CI 1.1-5.3) in unadjusted models.

Mental Health

Our research resulted in four articles that aimed to elucidate findings between discrimination and mental health aspects of Latino populations. In one study by Codina and Montalvo (1994) spanning the Southwestern region of the US, a probability sample of 991 Mexicans (376 males, 559 females) found by face-to-face interviews that U.S.-born Mexican men with darker skin had the highest levels of depression compared to those with light skin using regression analysis. This study found that results were maintained regardless of educational attainment, income or language proficiency and found no association between phenotype and depression for women. The authors concluded that more European-looking Chicanos faired better because perhaps they were able to go through life under the radar of discrimination.

Another study by Stuber et al. (2003) found that those who reported higher levels of racial discrimination likely reported poorer overall mental health via telephone interview for 382 Latinos in New York City. This study was one of few that distinguished between Puerto Ricans, Dominicans, and Mexicans. Scientist found a mean difference between rates of interpersonal

discrimination and linked those reports to likeliness of also reporting poor overall mental health (mean difference 0.59 using N. Krieger scale); however, the result was not significant at a more stringent level.

A study of a veteran military population including 1,736 Asian, Black and Hispanic males (of which 756 were Hispanic) by Sohn and Harada (2008) focused on studying how mental health was linked to discriminatory experiences during military service and training for the Vietnam War in veterans now living in the Greater Los Angeles area. Discrimination was measured by two variables including r/e discrimination during past military service (agree/disagree) or satisfaction toward health care provider's cultural sensitivity in Veteran Hospital in the past year. Bivariate analysis, chi-square test and t test were used to make associations between race/ethnicity and the dependent variables. Hispanic veterans (mean age 56.53 +/- 13.2 SD) were least satisfied with the cultural sensitivity of their provider in the past 12 months at the Veterans hospital. Although in adjusted models discrimination during past military experience was not linked to current mental health, the author did discover that current satisfaction to health provider's cultural sensitivity was linked to better mental health in all groups. The authors conclude that past discrimination occurred so long ago in the past that veterans may have coped already with past mental health issues and, therefore, no link between current mental health and past discrimination was seen in these veterans.

Flores et al., (2008) found that perceived discrimination was a predictor of depression and poor general health even when accounting for perceived stress. This study focused on 215 Mexican-origin adults recruited because of membership to an HMO provider in northern California and previous participation in another study. The study included 96 fathers and 119 mothers and through 1 hour phone interviews measured perceived discrimination through a self

created 14-point scale capturing everyday discriminatory stress due to minority status made specifically for Mexican or Latino origin. Perceived stress was measured through an established scale and depression through the Center for Epidemiological Studies Depression Scale. Men reported greater discrimination, and women reported greater stress, and depression, and when perceived stress was included in their models, discrimination remained a significant predictor of heightened depression ($b = 2.97$, $p < .002$). Even when accounting for general stressors, the authors conclude that chronic, daily discriminatory experiences pose a significant effect on depression and are harmful to the physical and mental well-being of Mexican origin adults.

Social Determinants

This study provides two articles that focus on the role that discrimination plays in influencing the social determinants that undoubtedly affect health. In a study conducted in Boston, Massachusetts, Gomez (2000) found that among men, those with darker skin of self-identified Puerto Rican and Dominican origin earned lower wages than men with lighter skin. Wage differences were not found to correlate to skin color in women. Using face-to-face interviews averaging 1 hour and 48 minutes, scientist judged skin color based on observation without any previous training and probed for racial inequality. Demographics on the individuals were already collected as part of the Boston Social Survey Data of Urban inequality. Hourly wage differences were significant at the p=0.10 level. The scientist concluded that skin color does matter for economic attainment in the sample of Latinos attributing the finding to labor market discrimination received by dark-skinned Latino men.

Finally, Telles & Murguia (1996) found by examining in 991 participants from southwestern US in a national probability sample, light skin color in Mexicans was linked to 1.5 more years of education. The study was performed through face-to-face interview and

phenotype (skin color) and education were measured. The scientist concludes that phenotype plays a significant role in predicting one's life chances (marked by educational attainment).

Limitations

The present review examined empirical articles providing basic evidence on the topic of discrimination in relation to physical health variables, poor mental health prevalence and the effects of discrimination on social determinants of health. However, the findings were plagued with errors that are very common in studies that focus on Latinos. The limitations of the research presented will be identified here.

The most apparent limitations in the physical health studies were the differences in the scales used to measure discrimination among all studies. Studies asked self-reported measurements of perceived discrimination while yet others used neighborhood demographics as a proxy for segregation and, therefore, r/e discrimination. Some of the scales were previously used to measure discrimination for Black participants, yet they were used on Latinos without prior testing. The focus on African Americans in physical health outcomes and discrimination is also very abundant and Latinos tend to be used as side-groups with very small (comparably) sample sizes to Blacks (example in one study only 18 Latino/a college students). Most importantly, these studies lacked the physiological mechanisms through which discrimination is detrimental to physical health and relied on mental health explanations for the manifestations of discrimination on health.

Mental health studies were also limited in their measurement of discriminatory experiences, with marked variation between studies again. The military populations study, for example, simply asked about the occurrence of a discriminatory event while Flores (2008) study had constructed its own 14-scale of discrimination to measure everyday discrimination. These

studies, however, were successful in highlighting gender differences on the effects of discrimination which, in turn, pointed out shortcomings in studies of physical health that did not focus on gender differences. The two studies that relied on face-to-face interviews while probing for past discriminatory experiences could result in underreporting because of unwillingness to divulge such potentially emotional events.

Conclusion and Discussion

The current review evaluated ten studies ranging from physical health, mental health to the social determinant of health to report current empirical evidence for the effects on health due to discrimination in Latino populations. Each field had evidence to support an overall pattern of the negative relationship between discrimination and health, however only few results were significant in their respective studies after correcting for pertinent variables. For physical health, past discrimination experiences were linked with higher resting SBP (Salomon and Jagustyn, 2008). While this study showed direct empirical evidence other studies failed to report significant findings in models correcting for other physical variables. Discrimination was also linked to higher rates of depression when accounting for education, income and language proficiency (Codina and Montalvo, 1994). Depression was the mostly likely outcome of discrimination for Latinos as another study found discrimination significantly affected depression rates after controlling for general stressors (Flores et al. 2008). Conversely, the influence of skin color on wage attainment was significant at a p level not acceptable for most studies.

These findings highlight the important role that discrimination can take in well-constructed studies with appropriate measures in place. Future research should strive to obtain an industry standard of sorts that captures discrimination with a particular emphasis on the way

Latinos are discriminated against today. These studies also failed, with few exceptions to highlight the importance of the heterogeneity of the Latino culture and phenotypes associated with Latin people. In the broader context of the Latino paradox, the conclusions drawn from the reviewed studies highlight the potential role that discrimination could be playing along with acculturation processes that are to the detriment of the protective benefits of the paradox. The studies on discrimination in the future should adhere also to the guidelines provided for all studies on Latino populations. The studies should embrace the multi-faceted diversity of Latino populations, and measure acculturation in dynamic ways. With these provisions, scientist will soon realize the true power discrimination exerts on Latino health outcomes and soon policy makers and government programs can strive to accommodate for the adverse affects of discrimination to Latino health.

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